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INDIGENOUS EMPLOYMENT: A STORY OF CONTINUING GROWTH

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Indigenous employment: A story of continuing growth

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Introduction

Recent reporting of the trends in Indigenous employment suggests that there has been no growth in Indigenous employment since the mid-2000s, or even that employment has decreased slightly (Altman & Biddle 2011). There have been headlines such as ‘Rising Aboriginal jobless rate fuels policy angst’ (*Sydney Morning Herald*, 27 July 2012). Such reports have been based on data from the Australian Bureau of Statistics (ABS) *Labour Force Survey*, and focus on changes in a measure of employment which includes Community Development Employment Projects (CDEP) participants.¹ Using census data, Biddle (2012a) similarly finds a lack of growth of Indigenous employment (including CDEP as employment) between 2006 and 2011.

However, when CDEP is excluded from the employment measure a very different picture emerges—one of a strong and sustained increase in non-CDEP employment since 1994 (Gray, Hunter & Lohoar 2012). The reason for the very different conclusion when CDEP is excluded is that there has been a decrease in the proportion of the Indigenous population employed under CDEP.

Over the period 1996 to 2006 the number of CDEP participants varied between approximately 26,000 and 35,000. Beginning in 2007 however, the CDEP scheme was progressively withdrawn from non-remote areas and the number of participants in remote areas were reduced. Collectively, these changes resulted in the number of CDEP participants falling from 32,800 to 10,692 at the time of the 2006 and 2011 censuses. As a percentage of the Indigenous adult population (15+ years) the proportion who were CDEP participants was fairly constant between 1996 and 2006, but then fell from 7 per cent in 2006 for women to 2 per cent in 2011, and for men from 13 per cent in 2006 to 3 per cent in 2011.²

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Any assessment of the effectiveness of policies designed to increase paid employment needs to allow for changes in the number of people on CDEP in order to identify the underlying trends in paid employment and engagement with the labour market.

This paper uses census data combined with CDEP administrative data to produce estimates of changes in non-CDEP employment for Indigenous Australians between 1996 and 2011.³ It is particularly important to examine the trends in Indigenous employment between 2006 and 2011, as the level of macroeconomic growth slowed substantially over this period as a result of the Global Financial Crisis (GFC) of 2007–08. While Australia was one of the few developed countries to avoid a recession in recent years—in part due to high commodity prices and the strong Chinese demand for resources—disadvantaged groups are sometimes argued to be disproportionately affected by slower growth (Hunter & Gray 2012a). Hence, it is important to understand to what extent this has impacted on Indigenous employment rates.

The analysis presented in this paper builds on data from the 1994 National Aboriginal and Torres Strait Islander Survey (1994 NATSIS) and the 2008 National Aboriginal and Torres Strait Islander Social Survey (2008 NATSISS), which revealed that there had been a very substantial increase in the proportion of the Indigenous population in non-CDEP employment since the mid-1990s. Furthermore, the increases in employment experienced by the Indigenous population over this period were greater than for the Australian population as a whole (Gray & Hunter 2011; Hunter & Gray 2012a).

This paper also provides information on employment type, with a particular focus on employment that is less likely to be affected by recent changes to the CDEP scheme. The effects of substantial growth in the mining sector are analysed in some detail. Changes in employment in the mining industry are of particular interest given the debate about the extent to which the mining boom may have resulted in a two-speed economy, which may have affected Indigenous Australians differently compared to other Australians.

Technical issues

The major challenge when using census data to estimate trends in non-CDEP employment is that CDEP is only partially identified by the census. This is because information on participation/work in the CDEP program was only collected for people who were enumerated using the Interviewer Household Form⁴, a form only used in some Indigenous communities. The standard census form does

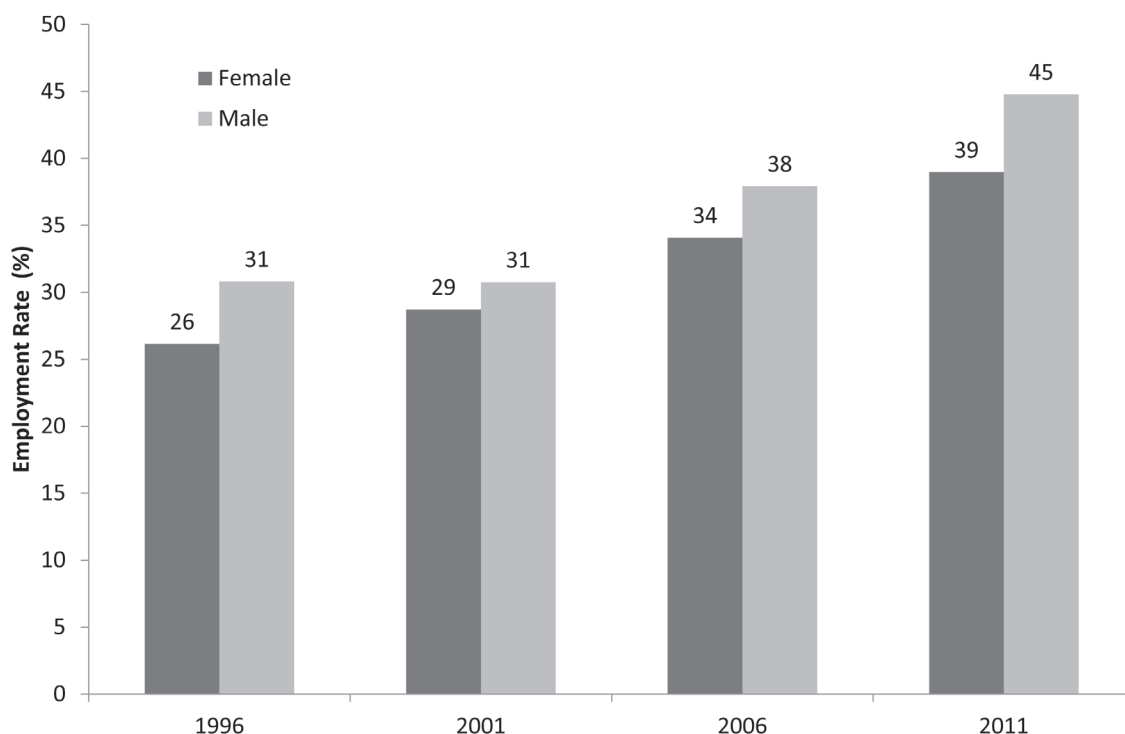
not include CDEP employment as a separate category. This leads to a substantial undercount of CDEP participants; for example, in the 2011 Census the number of CDEP participants identified was only 47 per cent of the total recorded in program administrative data. Estimates of CDEP (and consequently non-CDEP) employment taken directly from census data do not account for this under-enumeration.

The approach taken in this paper to estimate the non-CDEP employment rate is to deduct the number of CDEP participants recorded in administrative data from the total employment number recorded in the census.⁵

While it is possible to generate robust national estimates of non-CDEP employment and also estimates for broad geographic areas such as remote and non-remote Australia, there are some limitations on the extent to which the CDEP administrative data can be used to adjust employment estimates for smaller geographic regions.

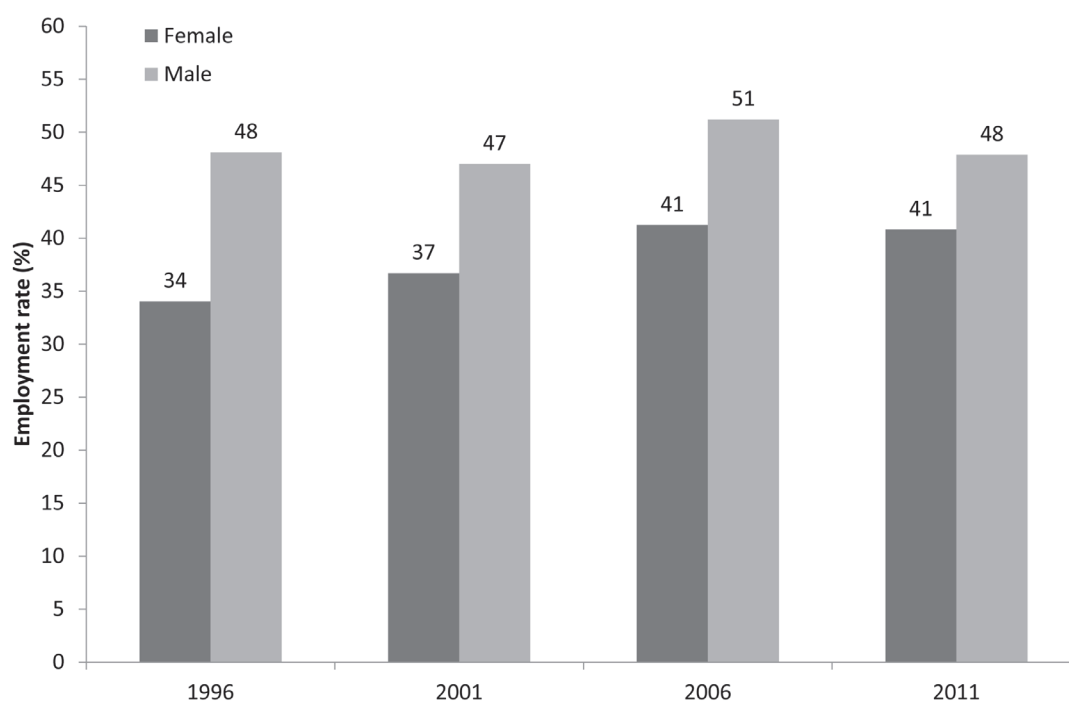
Employment to population rates are expressed as a percent of the estimated resident population, an ABS measure that takes into account the under-enumeration of Indigenous people in respective censuses. Historical population estimates have been adjusted to be consistent with the 2006 Indigenous population (ABS 2009), and raw census counts weighted up to be consistent with the estimated resident population. The population series will probably be adjusted when revised time series estimates for the Indigenous population are provided later in 2013.

Finally, the calculations of non-CDEP rates are based on the assumption that CDEP people do not also have a non-CDEP job, and hence the employed can be partitioned neatly into the CDEP and non-CDEP employed. While this assumption holds true for the majority of the CDEP employed, this is only an approximation. At the time of the 2008 NATSISS, 8.1 per cent of CDEP workers claimed they worked in two jobs (Hunter & Gray 2012b). Unfortunately the nature of the relevant questionnaire is such that there was no further information on the second job and hence the second job may also be in the CDEP scheme. If this were the case, then the partitioning of employment into CDEP and non-CDEP workers will not distort our estimate of the number of people identified as non-CDEP employed. However, even if we assume that all these 8.1 per cent of CDEP workers had a second job in non-CDEP work, and hence they could also be classified as non-CDEP employed, this only would result in an understatement of the non-CDEP employment rate by 0.5 per cent. This adjustment is very minor and will not affect the conclusions drawn in the following discussion.

FIG. 1. Non-CDEP employment to population rate by gender, Indigenous, 1996-2011


Notes: Population is Indigenous males and females aged 15+ years. For 2011, the non-CDEP employment rate for all Indigenous persons is 42 per cent.

Sources: ABS (1996, 2001); 2006 and 2011 Censuses; CDEP program data; estimated resident populations 1996-2006 from ABS (2009) and 2011 from ABS (2012).

FIG. 2: Non-CDEP plus CDEP employment to population rate by gender, Indigenous, 1996-2011


Notes: Population is Indigenous males and females aged 15+ years.

Sources: ABS (1996, 2001); 2006 and 2011 Censuses; CDEP program data; estimated resident populations 1996-2006 from ABS (2009) and 2011 from ABS (2012).

Trends in Indigenous employment, 1996 to 2011

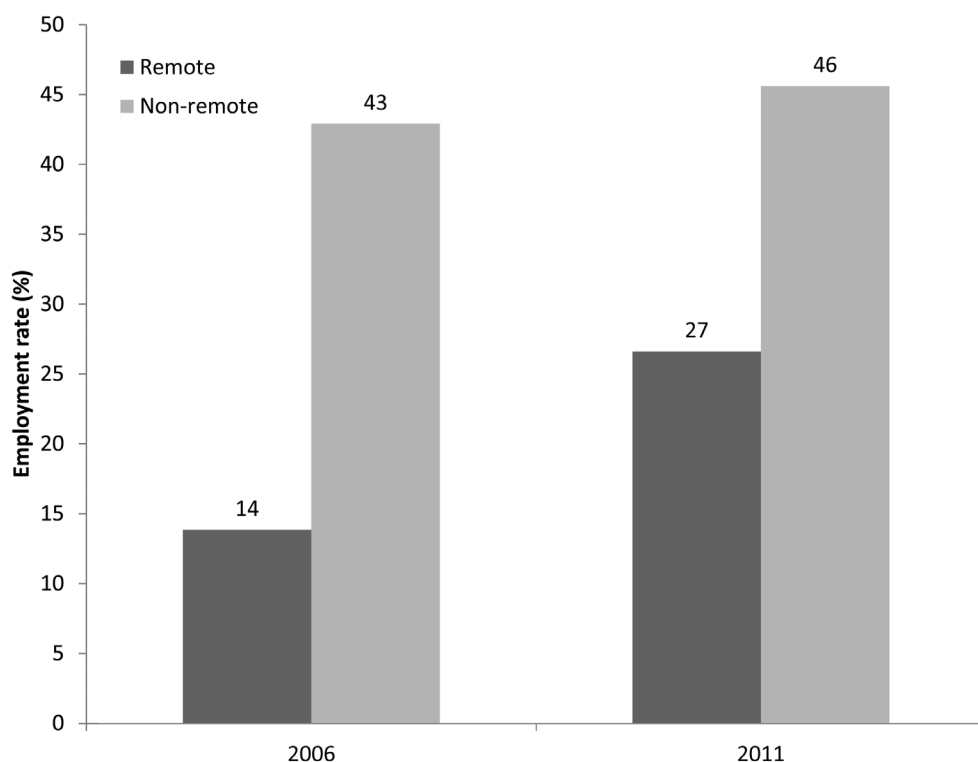
Fig. 1 shows the non-CDEP employment to population rate for Indigenous women and men aged 15 years and over from 1996 to 2011.⁶ For both men and women there were substantial increases in non-CDEP employment. For Indigenous women, the non-CDEP employment rate increased from 26 per cent in 1996 to 39 per cent in 2011, an increase of 13 percentage points. Over this period the employment rate of other Australian women as a whole increased from 49 per cent to 56 per cent. For Indigenous men, the non-CDEP employment rate increased from 31 per cent to 45 per cent. For other Australian men the employment rate increased from 65 per cent to 68 per cent.

The increases in employment rate for the Indigenous population are substantial. For men, there was no increase in the rate of non-CDEP employment between 1996 and 2001, but then substantial increases of 7 percentage points in each subsequent inter-censal period. For women, there were increases of 3 percentage points between 1996 and 2001 and then increases in the later inter-censal periods of 5 percentage points. The GFC of 2007–8 and the subsequent lower rate of growth of the Australian economy

do not seem to have slowed the increase in non-CDEP employment observed for Indigenous men and women.

Fig. 2 shows the employment to population rate when CDEP is treated as employment. If the non-CDEP plus CDEP employment rate is examined, then the conclusion is that there has been a more modest increase in employment for Indigenous women than if the non-CDEP employment rate is used; for men the conclusion is that there has been no increase in the employment rate between 1996 and 2011, despite the fact that there has been a substantial increase in the non-CDEP employment rate. CDEP program funding is independent of the state of the labour market, and hence the number of CDEP jobs depends on program decisions rather than underlying economic conditions. We argue that policy-makers need to understand Indigenous peoples' actual engagement with the economy rather than conflating this economic information with historical decisions made about program budgets. Accordingly, the remainder of this paper focuses on non-CDEP scheme employment wherever possible.

FIG. 3. Non-CDEP employment to population ratio, by remoteness, 2006-2011



Notes: Population is Indigenous males and females aged 15+ years. Remote areas are defined according to the 2006 remoteness categories. The 2006 CDEP proportions by remoteness are based on 2002 data. For 2011 it is assumed that there is no CDEP participation in non-remote areas.

Sources: 2006 and 2011 Censuses; CDEP program data; estimated resident populations 2006 from ABS (2009) and 2011 from ABS (2012).

TABLE 1: Proportion of employment in private sector by Indigenous status, gender and remoteness, 2006–2011

	Indigenous (%)		Non-Indigenous (%)	
	Remote	Non-remote	Remote	Non-remote
Female				
2006	57.3	74.9	77.9	82.4
2011	63.0	74.2	75.7	80.5
Male				
2006	57.4	82.9	88.0	88.2
2011	71.0	83.3	88.6	87.6

Notes: Population is Indigenous males and females aged 15+ years. Includes CDEP and non-CDEP employment. Remote areas are defined according to the 2006 remoteness categories.

Sources: 2006 and 2011 Censuses.

Trends in non-CDEP employment by geographic remoteness

The analysis of Gray and Hunter (2011) using data from the 1994 NATSIS and 2008 NATSISS found that between 1994 and 2008 there were increases in non-CDEP employment in both remote and non-remote areas of Australia. Analysis of the 2006 and 2011 Censuses shows that the increases in non-CDEP employment continued in both remote and non-remote areas, but that the increases were greater in remote areas (Fig. 3). In remote areas the non-CDEP employment rate increased by 13 percentage points from 14 per cent to 27 per cent compared to an increase of 3 percentage points from 43 per cent to 46 per cent in non-remote areas.

In order to assist in understanding what is behind the increases in non-CDEP employment in remote areas, the proportion of employment that is in the private sector is shown in Table 1. Both CDEP and non-CDEP employment are included in this table because, as discussed above, only about half of CDEP employment is identified as CDEP in the census.

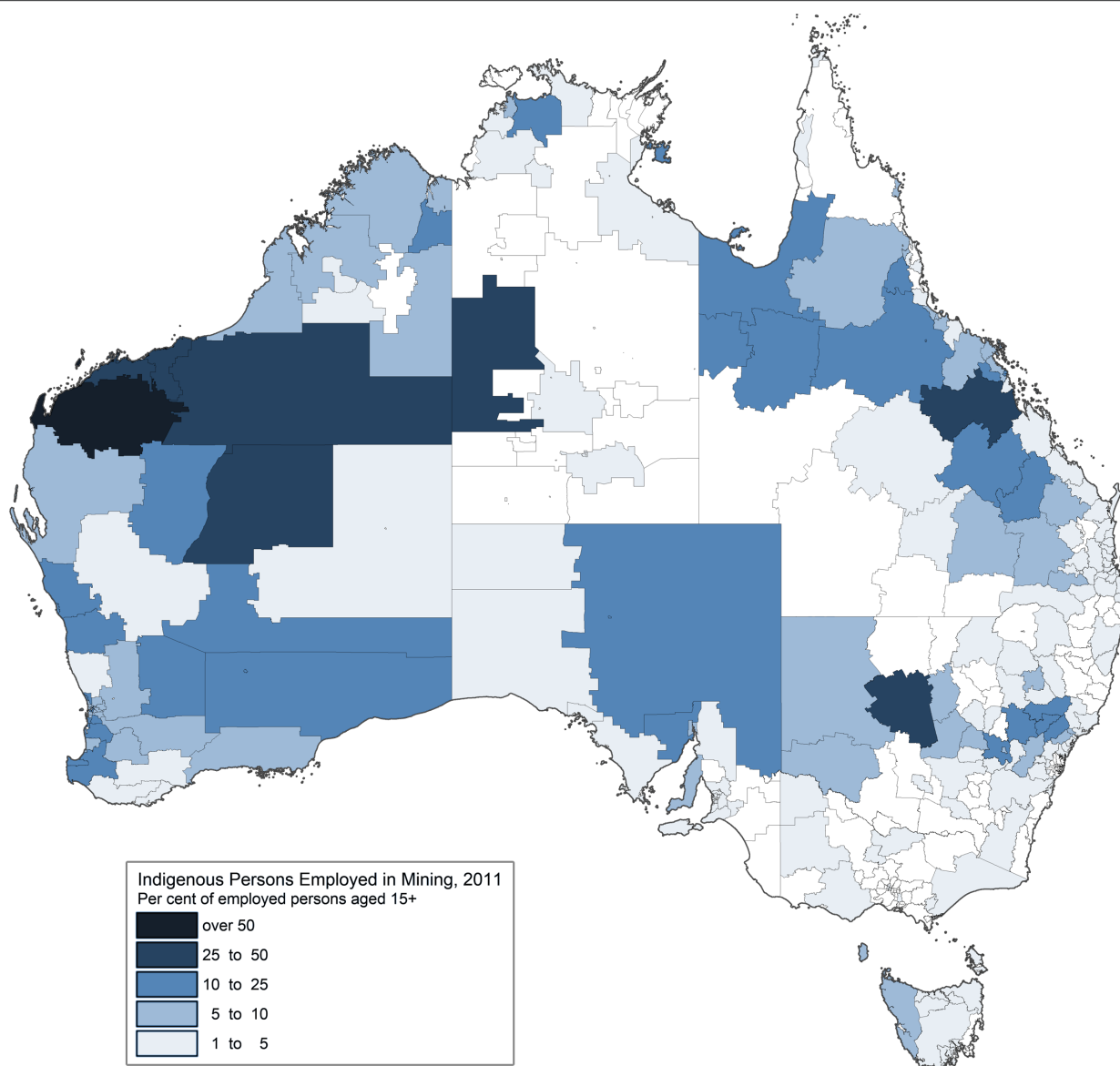
In remote areas, the proportion of employment in the private sector for both Indigenous women and men increased substantially between 2006 and 2011 (from 57 per cent to 63 per cent for women and 57 per cent to 71 per cent for men). In general CDEP employment is classified as public sector employment, and so the increase in the proportion employed in the private sector needs to be understood in the context of both changes to the CDEP scheme and increases in Indigenous employment rates in remote areas.

For Indigenous people in non-remote areas the proportion of women and men in private sector employment changed little between 2006 and 2011, meaning that the employment growth in these areas was in both the public and private sector. In contrast, private sector employment for non-

Indigenous males and females declined in non-remote areas, which showed the underlying weakness in the economy for those areas. The issue of the two-speed economy may be relevant in non-remote areas, where industries are sensitive to a relatively high dollar exchange rate being propped up by the mining boom.

Between 2006 and 2011 there was some change in the industrial structure of the Australian economy. The main adjustment was in remote and regional areas, with substantial employment increases in the mining industry and large falls in the number employed in the agriculture, forestry and fishing industries. Adjusted census counts for 2006 and 2011 suggest there are 78,000 extra jobs in mining and almost 41,000 fewer jobs in agriculture, forestry and fishing. The former is clearly associated with the mining boom, while the latter may be explained in terms of the rise of large-scale, capital-intensive agribusiness and the effect of prolonged and widespread drought (Hunter, Gray & Edwards 2012). While this constitutes large changes for those two industrial sectors, they are dwarfed by the overall size of the Australian workforce of almost 11 million.

One question for this paper is how did these changes affect Indigenous workers? The percentage of Indigenous males and females employed in mining more than doubled in remote areas between 2006 and 2011. Employment in mining also increased in non-remote areas, most likely associated with greater utilisation of fly-in fly-out workers. The number of Indigenous miners increased in remote and non-remote areas from approximately 1,400 and 1,900 respectively in 2006 to 3,100 and 4,400 in 2011. While this is still a small portion of the overall Indigenous workforce in Australia, it is a significant portion of Indigenous employment in particular regions. Indigenous involvement in mining increased substantially as a percentage of all Indigenous employment and is now closer to the percentage of mining employment for overall Australian employment.

FIG. 4. Indigenous employment in the mining industry, 2011

Notes: Includes CDEP employment.

Source: 2011 Census.

Also, this focus on direct mining employment misses the multiplier effects that major mines have on employment in other industries such as construction, transport and hospitality in the areas in which they are located.

Despite the substantial job loss in the agriculture, forestry and fishing industries across Australia, Indigenous workers in that sector also fared relatively well compared to other Australians. In remote areas, the agriculture, forestry and fishing industries lost almost 9,000 jobs between the last two censuses, but more Indigenous people were employed in that sector in 2011 compared to 2006.

Fig. 4 illustrates the geography of Indigenous employment in mining by ABS Indigenous Area. This unsurprisingly

shows that mining employment is the most important component of Indigenous employment in the areas that are close to where the mines are located (e.g., Pilbara, Central Queensland). More noteworthy is that mining employment constitutes over half of overall Indigenous employment (including CDEP employment) in some of these Indigenous Areas.

These changes in employment mean that the extent to which the Indigenous workforce has a similar composition in industry of employment as that for other Australian workers has increased. One way of quantifying the extent to which Indigenous workers are incorporated into the Australian economy is the Duncan and Duncan (1955) segregation index. This can be interpreted as the

TABLE 2. Areas with largest decrease in Indigenous employment (CDEP+non-CDEP), 2006-11

	Change in employment, 2006-11 (%)	Change in income, 2006-11 (%)
Yarrabah	-47	-16.2
Fitzroy River	-31	-12.3
Halls Creek – Surrounds	-29	3.3
Fitzroy Crossing	-29	-5.0
Hope Vale	-29	8.2
Warburton	-26	7.6
Kowanyama	-26	-0.4
Great Sandy Desert	-26	17.2
North Kimberley	-24	-0.6
Broome - Surrounds	-22	25.3
Argyle – Warmun	-22	-9.8
Aurukun	-20	-10.8
Cherbourg	-20	-13.6

Notes: Population is Indigenous males and females aged 15+ years. Income in 2006 has been CPI-adjusted.
Source: 2006 and 2011 Censuses.

proportion of the Indigenous workforce that would have to change jobs (and move to another industry) so that the industrial composition of Indigenous and other Australian workers is identical.

The segregation index for females in remote areas fell from 0.37 in 2006 to 0.30 in 2011; for men it fell from 0.50 in 2006 to 0.38 in 2011. The decline of the role of CDEP in total employment in these areas is likely to be a substantial part of the story, as new Indigenous jobs have to be found within the local economy. In non-remote areas, the segregation indexes fell around 1 percentage point to be approximately 0.13 for both females and males. The upshot is that Indigenous workers are more likely to be employed in similar industries to that of other Australians than ever before. These estimates can be put in an historical context by citing segregation indexes from 1976, when almost 40 per cent of Indigenous workers would have had to change jobs to equate the industrial distributions (Hunter 2004). Furthermore, industrial segregation has fallen in all but one inter-censal period since the 1970s. Indigenous workers are clearly becoming more integrated into the broader Australian economy over time.

Table 2 provides a final piece of geographic analysis that focuses on those areas that have experienced substantial loss of Indigenous employment between 2006 and 2011. The 13 areas examined saw employment to population ratios decline by between 20 and 47 per cent. It is not surprising that all these Indigenous areas had one or more

CDEP schemes in operation. More surprising is that 5 out of the 13 areas experienced an increase in average personal income. Indeed, in Broome and surrounds there was a 25 per cent increase in income at a time when employment declined by 22 per cent. Indigenous people who were in jobs or secured new jobs must have been paid substantially more than previous Indigenous workers in those areas.

While the declines in Indigenous employment in these areas are large, it should be noted that quite a few areas experienced falls in non-Indigenous employment of over 20 per cent. However, in contrast to the data in Table 2, almost all areas that experienced a substantial fall in employment also experienced a similarly large fall in income. This underscores the importance of income support in reducing the role of economic shocks, and the fact that a CDEP wage is not that dissimilar to income support payments.

Conclusion

Analysis of census data shows that for Indigenous Australians, non-CDEP employment increased substantially between 2006 and 2011. For Indigenous men, non-CDEP employment increased from 38 per cent to 45 per cent, and for women it increased from 34 per cent to 39 per cent. This continued a pattern of strong employment growth occurring since the mid-1990s. This growth has previously been documented using data from both the 1994 NATSIS and the 2002 and 2008 NATSISS, and using data from the Labour

Force Survey (in combination with administrative data). The increases in Indigenous employment have occurred despite the weaker economy following the GFC of 2007–08.

The conclusion that Indigenous non-CDEP employment has continued to grow strongly differs from that reached when changes in the standard census classification of employment (which includes CDEP) are examined. Failure to clearly focus on non-CDEP employment leads to very misleading conclusions about employment growth and the effectiveness of government policy aimed at increasing non-CDEP employment.

The biggest increases in non-CDEP employment have been in remote areas, although in non-remote areas there has still been a steady, albeit more modest, increase in the employment rate between 2006 and 2011.

Between the 2006 and 2011 Censuses the Indigenous population count increased by 20.5 percentage points (Biddle 2012b). This increase is greater than can be explained by fertility and changes in mortality, and so part of the increase must be due to changes in men and women identifying themselves as Indigenous between 2006 and 2011. The implications of the changes in Indigenous identification for the changes in the employment rate are unknown, but our assessment is that it is extremely unlikely that changes in identification could explain all of the increases in employment, as the largest increases in employment were in remote areas which had the smallest increases in Indigenous population (Biddle 2012b).

It is clear that Indigenous employment in the mining sector increased substantially between 2006 and 2011, even if mining employment remained a relatively minor contributor to overall employment. In remote areas the increase in Indigenous employment has been driven by increases in private sector employment. In non-remote areas the proportion of Indigenous employment recorded as being in the private sector did not change between 2006 and 2011.

One important implication of the analysis in this paper is that the interpretation of the Closing the Gap employment targets need to be carefully considered. These targets include CDEP employment in the starting measure of the employment gap. The failure to take into account that CDEP is different from other employment may lead to the conclusion that progress is not being made in reducing the difference in employment rates between Indigenous and non-Indigenous people. Our analysis suggests that such a conclusion would be misleading.

The long-term welfare of Indigenous people partially depends on the extent of economic engagement with the mainstream economy and the independence that such engagement engenders. Income support arrangements and potentially program-driven employment outcomes such as CDEP have an important role to play in reducing the impacts of economic shocks and in lessening inequality. However, the processes underlying non-CDEP employment have played an important and distinct role that needs to be further studied and understood.

Notes

1. The CDEP scheme is an Indigenous-specific program that enables an Indigenous community or organisation to pool the unemployment benefit entitlements of individuals into direct wages for those people who choose to participate in local employment in various community development or organisation programs as an alternative to receiving individual income support payments (ABS 2011). There is an ongoing debate about whether CDEP should be classified as paid employment for statistical purposes (Gray, Lohar & Hunter 2012).
2. Figures derived from CDEP administrative data on number of participants and the estimated resident population projections from the census (i.e. counts scaled up to take account of the net undercount).
3. To date, most of the assessment of changes in Indigenous employment between 2006 and 2011 has been based upon data from the ABS Labour Force Survey. However the Labour Force Survey is not the best source of data for analysing trends in indigenous employment because the Indigenous sample is relatively small: estimates of Indigenous employment are measured with substantial sampling error.
4. In earlier censuses the Special Indigenous Enumeration Form was used.
5. Information about participation in CDEP is asked as a separate question only on the Interviewer Household Form and is not collected from people enumerated on the standard census form. The changes to the CDEP scheme from July 2009 may have affected whether people enumerated using the standard census form said that they were employed. Any changes in whether CDEP participants said that they were employed is likely to be amongst people who would have previously said that they were employed, but who in the 2011 Census responded that they were not employed. While this may have happened we do not have any evidence either way and it is likely that such an effect is small. To the extent to which this happened our process of deducting the number of CDEP participants recorded in the administrative data from the census employment numbers will result in us underestimating the non-CDEP employment rate in 2011.
6. The gender breakdown of CDEP participation over time is derived from the data on gender from CDEP employed from the 1994 NATSIS and the 2002 and 2008 NATSISS, combined with the number of participants from CDEP administrative records (see note in Table A2 in Gray, Hunter and Lohar 2011).

References

- Australian Bureau of Statistics (ABS) 1996. *1996 Census of Population and Housing: Aboriginal and Torres Strait Islander People*, cat. no. 2034.0, ABS, Canberra.
- 2001. *2001 Year Book Australia*, cat. no. 1301.0, ABS, Canberra.
- 2009. *Experimental Estimates and Projections, Aboriginal and Torres Strait Islander Australians*, cat. no. 3238.0, ABS, Canberra.
- 2011. *Labour Force Characteristics of Aboriginal and Torres Strait Islander Australians, Estimates from the Labour Force Survey, 2010*, cat. no. 6287.0, ABS, Canberra.
- 2012. *Australian Demographic Statistics, March 2012*, cat. no. 3101.0, ABS, Canberra.
- Altman, J. and Biddle, N. 2011. 'The massive Indigenous employment gap stagnates', Crikey, July 1, <<http://www.crikey.com.au/2011/07/01/the-massive-indigenous-employment-gap-stagnates/>>.
- Biddle, N. 2012a. 'Closing the gap on Indigenous employment? Not quite', The Conversation, October 31, <<http://theconversation.edu.au/closing-the-gap-on-indigenous-employment-not-quite-10426>>.
- 2012b. 'Indigenous language use', *Indigenous Population Project 2011 Census Paper 1*, CAEPR, ANU, Canberra.
- Duncan, O. and Duncan, B. 1955. 'A methodological analysis of segregation indexes', *American Sociological Review*, 20 (2): 210–17.
- Gray, M. and Hunter, B. 2011. 'Changes in Indigenous labour force status: Establishing employment as a social norm?' *CAEPR Topical Issue No. 7/2011*, CAEPR, ANU, Canberra, available at <<http://caepr.anu.edu.au/Publications/topical/2011TI7.php>>.
- , — and Lohar, S. 2012. 'Increasing Indigenous employment rates', *Closing the Gap Clearinghouse Issues Paper No. 3*, Australian Institute of Health and Welfare, Canberra, available at <<http://www.aihw.gov.au/closingthegap/publications/>>.
- Hunter, B.H. 2004. *Indigenous Australians in the Contemporary Labour Market*, cat. no. 2052.0, ABS, Canberra.
- and Gray, M. 2012a. 'Indigenous labour supply following a period of strong economic growth', *Australian Journal of Labour Economics*, 15 (2): 141–59.
- and — 2012b. 'Continuity and Change in the CDEP Scheme', *Working Paper No. 84*, CAEPR, ANU, Canberra, available at <<http://caepr.anu.edu.au/Publications/WP/2012WP84.php>>.
- , — and Edwards, B. 2012. 'The use of social surveys to measure drought and the impact of drought', *Social Indicators Research*, pp. 1–14.
- Reserve Bank of Australia, 2010. 'The Global Financial Crisis and its Impact on Australia', in ABS, *Year Book Australia, 2009–10*, cat. no. 1301.0, ABS, Canberra.